

EGG-LAYING HABITS OF THE MIDDLE AMERICAN ARBOREAL LIZARD  
*LAEMANCTUS LONGIPES*, WITH PARTICULAR REFERENCE  
TO NEST SITE SELECTION

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THE genus *Laemanctus* (Corytophanidae) consists of two moderately large (ca. 150 mm SVL) iguaniform lizards characterised by a unique, flat-topped cephalic casque. One species, *L. longipes* Wiegmann, occurs in wet-subhumid forests from eastern Mexico to Nicaragua, and the other, *L. serratus* Cope, is endemic to areas of more xeric deciduous forest in southern Mexico and the Yucatán Peninsula (McCoy, 1968; Lang, 1989). Both are highly arboreal species that rely on crypsis and immobility to avoid detection, and relatively uncommon, which probably explains why so little is known of their behaviour and ecology. Information on reproduction in these distinctive-looking lizards is especially limited.

In this note we describe the egg-laying habits of *L. longipes* (Eastern Casque-headed Basilisk), as demonstrated by a female observed during fieldwork in Belize on 29<sup>th</sup> April 1993.

At approximately 08:30 hrs the lizard was found in a small clearing on a hilltop at GR CP088595, (elevation 520 m) in semi-evergreen broadleaf forest. This clearing had been made the day before to facilitate installation of a temporary observation tower (for bird inventory work), and apart from a few saplings left uncut to promote subsequent recovery of the site was otherwise devoid of vegetation. On the ground there was only a sparse covering of leaf litter. The nest itself was a shallow scrape between roots at the base of one of the smaller felled trees, approximately five metres away from the forest edge. When first observed the lizard was beginning to move away from the nest, which had been left uncovered, probably as a result of her having been disturbed, and contained three eggs. These were removed to avoid the possibility of them being trampled during the ensuing operations, and incubated artificially at ambient temperatures. All three, however, failed to hatch. Measurements of the eggs taken shortly after deposition were 25 x 14 mm, 26 x 15 mm, and 26 x ? mm (dented) respectively. Air temperatures on the day in question ranged from (shade readings in parentheses) 25(25)°C at 06:30 hrs to 39.5(27)°C at 12:00 hrs and 34(27)°C at 18:00 hrs. There



Female *Laemanctus longipes* at nest site. The nest scrape and clutch of eggs are visible in the lower left corner of the picture. Photograph by E. Mallory.

had been no significant rain in the previous weeks, but barometric pressure was falling and a period of regular heavy downpours followed between 9<sup>th</sup> and 14<sup>th</sup> May.

An interesting feature of this lizard's egg-laying activity is its choice of nest site, located some distance from tree cover in a relatively open clearing. McCarthy (1982) reported on a gravid female *L. longipes* that he had found also in a small clearing and which deposited eggs in captivity a day later. Such behaviour may seem somewhat irregular for an arboreal and reclusive deep forest species, but appears to be not unusual within the *Corytophanidae*. In Tamaulipas, Martin (1958) found individuals of *L. serratus* excavating nests in the middle of forest trails, and similar behaviour has been observed in *Corytophanes cristatus* (Taylor, 1956; Bock, 1987; Lazcano-Barrero & Gongóra-Arones, 1993) and *C. hernandezii* (Pérez-Higareda, 1981). Given the presumably increased risk of predation, both to the adult lizard during oviposition and hatchlings at the time of emergence, the strategic value of such behaviour is not clear. Many species of lizard are known to lay eggs in relatively 'exposed' areas, among them other basiliacines (e.g. Lieberman, 1980; Hirth, 1963; Fitch, 1973), but in most cases these are less specialised, often gregarious forms that rely more on 'flight' than crypsis to avoid predation. A possible explanation is that nests placed in open areas with minimal vegetation and leaf litter cover may reduce detection of the buried eggs by certain predators, as suggested for *C. cristatus* by Lazcano-Barrero & Gongóra-Arones (1993). Alternatively, the greater intensity of sunlight at ground level in forest clearings suggests that heat (incubation temperature) or substrate moisture level (drier than beneath canopy, thus reducing the possibility/extent of contamination of the eggs by fungi), may be the primary factor(s) controlling nest site selection in these species.

According to most reports, *L. longipes* breeds during the wet season. Campbell (1998) gives the egg laying period as June-September, with reported hatching dates ranging from 16<sup>th</sup> June (Campbell, 1998) to 30<sup>th</sup> August (Duellman,

1963). The deposition of eggs in late April by the specimen described here probably represents a very early wet season record, but also suggests the possibility of an extended breeding season and the production in some individuals of more than one clutch per year. Clutch size and egg dimensions fall within the ranges specified for *L. longipes* by Campbell (1998).

*Laemanctus longipes* does not seem to use its head as an earth-moving 'scoop' during nest excavation, as has been reported for *Corytophanes* spp. (Pérez-Higareda, 1981; Bock, 1987; Lazcano-Barrero & Gongóra-Arones, 1993). When captured for closer examination, no obvious accretions of earth could be found on the lizard's head or forebody, and it is probable that nest holes are dug using only the front feet, as indicated by Martin (1958) for *L. serratus*.

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